

ANNOTATIONES ZOOLOGICAE JAPONENSES

Volume 50, No. 3—September 1977

Published by the Zoological Society of Japan

Two New *Peloribates*-Species (Acari, Oribatida) Collected
from Lichens Growing on Tombstones in
Ichihara-shi, Central Japan

With 2 Text-figures

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ABSTRACT Among the oribatid specimens collected from lichens growing on tombstones, two new species of the genus *Peloribates* were found. They are described under the names, *Peloribates nishinoi* and *P. barbatus*. The former species is characterized by the notogastral setae swollen at tip, and the latter by the thick, strongly barbed notogastral setae, short sensilli and the presence of small foveolae on the notogaster.

An ecological investigation on the mite fauna of lichens growing on tombstones was made by Mr. F. Nishino of Toho University in Ichihara City of Chiba Prefecture. Among numerous oribatid species collected there the author found two new species of the genus *Peloribates* (Oribatida: Haplozetidae), which are described below. The result of the faunistic and ecological study of these lichenophagous mites will be published later in collaboration with him.

Peloribates nishinoi sp. n.

(Fig. 1)

Measurement. Body length: 359 (383) 440 μ ; body width: 218 (259) 290 μ ; RLN (relative length to notogaster) of body setae: *ro* 21, *la* 30–32, *in* 29–32, *c*₁ 16, *c*₂ 15–17, *da* 13–15, *dm* 11, *dp* 11, *la* 14–16, *lm* 11–12, *lp* 12, *h*₁ 14–16, *h*₂ 13, *h*₃ 12–14, *ps*₁ 13–14, *ps*₂ 15, *ps*₃ 13–14.

Prodorsum. Rostral, lamellar and interlamellar setae different in shape from one another: tip of the setae pointed in *ro*, blunt in *la* and swollen in *in*; barbation of the setae strong in *ro*, moderate in *la* and weak in *in*; *la* and *in* subequal in length and 1.5 \times as long as *ro*. Exobothridial seta short and pointed at tip. Sensillus clavate, with a strongly swollen head, which is nearly globose and somewhat shorter than the exposed portion of its peduncle. Integument of prodorsum foveo-

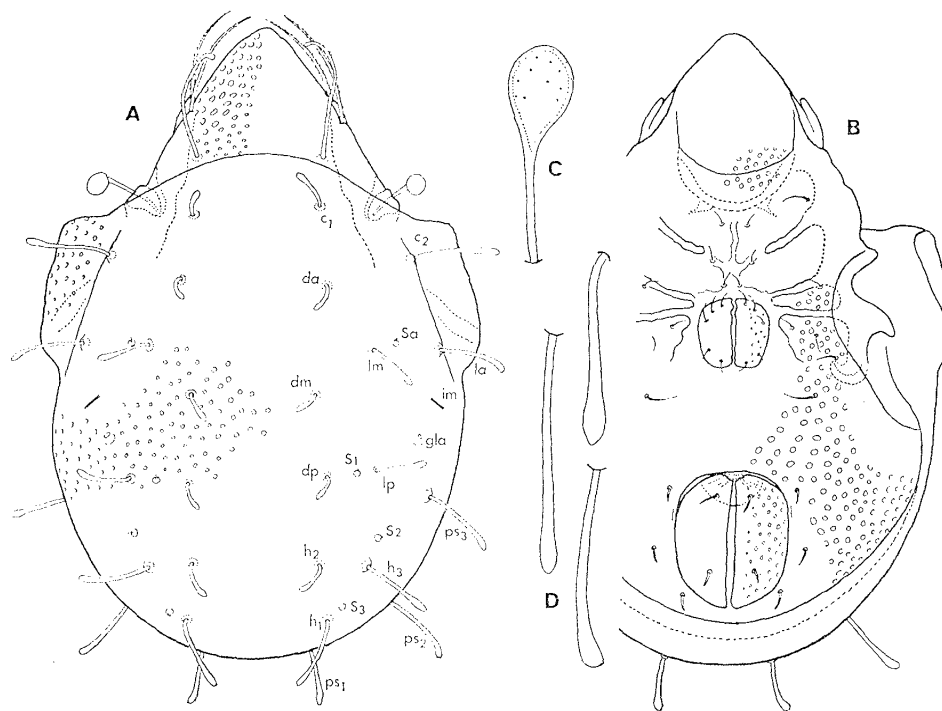


Fig. 1. *Peloribates nishinoi* sp. n.—A, Dorsal side; B, ventral side; C, sensillus; D, notogastral setae.

late, the foveolae being larger in the anterior part and smaller in the posterior part of prodorsum.

Notogaster. Fourteen pairs of notogastral setae glabrous and peculiar in shape, being distinctly swollen apically; RLN of the setae ranging from 11 to 17 (average: 13.5); setae c_2 usually the longest and dm , dp and lm the shortest among them; relative length of mutual distances of the median series of setae: $dp-dp \geq c_1-c_1 \geq da-da > dm-dm$; $h_1-h_1 > h_2-h_2 > ps_1-ps_1$; but the differences in the distances are very slight. Four pairs of small sacculi are present; Sa located lateral to lm , S_2 between dp and lp , S_2 anterior to h_3 , and S_3 very close to and lateral to h_1 . Integuments of notogaster and pteromorphae show a distinct foveolation.

Ventral side. Epimeral and ventral plates uniformly foveolate. Foveolae on genital and anal plates smaller than those on the ventral plate. Five pairs of genital, 1 pair of aggenital, 2 pairs of anal and 3 pairs of adanal setae are present; they all nearly smooth and pointed at tip; the aggenital setae the longest among them; the posterior anal seta an_1 more separated from the posterior margin of anal plate than the distance between an_2 and the anterior margin of the plate; the anteriormost adanal seta ad_3 inserted always a little posterior to the level of the anterior margin of anal opening; ad_2 usually subequally distant from ad_1 and ad_3 , but sometimes closer to ad_1 or ad_3 .

Type-series. Holotype (NSMT-Ac 9018, in spirit): Ichihara City, Chiba

Prefecture, 31-X-1976, F. Nishino, *ex* lichens growing on tombstones (JA2292).
 —26 paratopotypes: the same data as the holotype. The type-series will be deposited in the collection of the National Science Museum (Nat. Hist.), Tokyo.

Remarks. The most characteristic feature of the present new species is the peculiar shape of the interlamellar and notogastral setae which are swollen apically. None of the other known species of the genus *Peloribates* show such a condition of the body setae. The species was named after Mr. F. Nishino who was kind enough to offer the author the interesting lichenophagous oribatids including the present new species.

Peloribates barbatus sp. n.

(Fig. 2)

Measurement. Body length: 330–415 μ ; body width: 234–300 μ ; RLN of body setae: *ro* 20, *la* 26–28, *in* 33–34, *c*₁ 19, *c*₂ 19–20, *da* 16, *dm* 16, *dp* 17–18, *la* 18–22, *lm*, 15, *lp* 16–18, *h*₁ 25–28, *h*₂ 20–23, *h*₃ 20–22, *ps*₁ 18–20, *ps*₂ 19–24, *ps*₃ 18–23.

Prodorsum. Interlamellar setae the longest among the prodorsal setae, being 1.3 \times as long as lamellar setae and about 1.7 \times as long as rostral setae; they all barbed throughout their length, sharply pointed at tip except for interlamellar setae; exbothridial setae fine and short, about 1/3 the length of rostral setae. Sensillus club-shaped, with a strongly swollen head, which is barbed and almost as long as the exposed portion of peduncle. Bothridial scale hemidiscal. Prodorsal surface with distinct foveolae, which become progressively larger toward the anterior direction.

Notogaster. Fourteen pairs of notogastral setae moderately long, blunt at tip and strongly barbed; the barbation becoming stronger toward apex of the setae; RLN of the setae 15–28 (average: 19.3); setae *h*₁ are the longest and setae *da*, *dm* and *lm* are the shortest; all the notogastral setae, even the longest setae *h*₁, are shorter than their mutual distances; the relative lengths of the mutual distances of the median setae: $c_1-c_1 \leq h_1-h_1 > dp-dp > h_2-h_2 \geq da-da = dm-dm > ps_1-ps_1$. Four pairs of small sacculi arranged as in Fig. 1A: *S*_a very close to and in front of seta *lm*, *S*₁ between *dp* and *lp*, *S*₂ in front of *h*₃, and *S*₃ lateral to *h*₁. Integument of notogaster and pteromorphae shows the foveolae, which are far smaller than those on prodorsum. Pteromorphae finely striated transversely.

Ventral side. Integument of epimerata shows three different kinds of structures, i. e. foveolate, leather-like and granulate. Genital plate with a few foveolae and 5 fine, relatively long setae. Anal plate with 2 minutely barbed setae; integument of the plate shows large and small foveolae mixed. Three pairs of adanal setae weakly barbed, nearly equal in length and equally spaced. A small adanal fissure (*iad*) located close to anal margin, posteriorly of *ad*₃. Aggenital setae weakly barbed, almost twice as long as adanal setae. Integument of ventral plate distinctly foveolate as on prodorsum.

Type-series. Holotype (NSMT-Ac 9019, in spirit): Ichihara City, Chiba

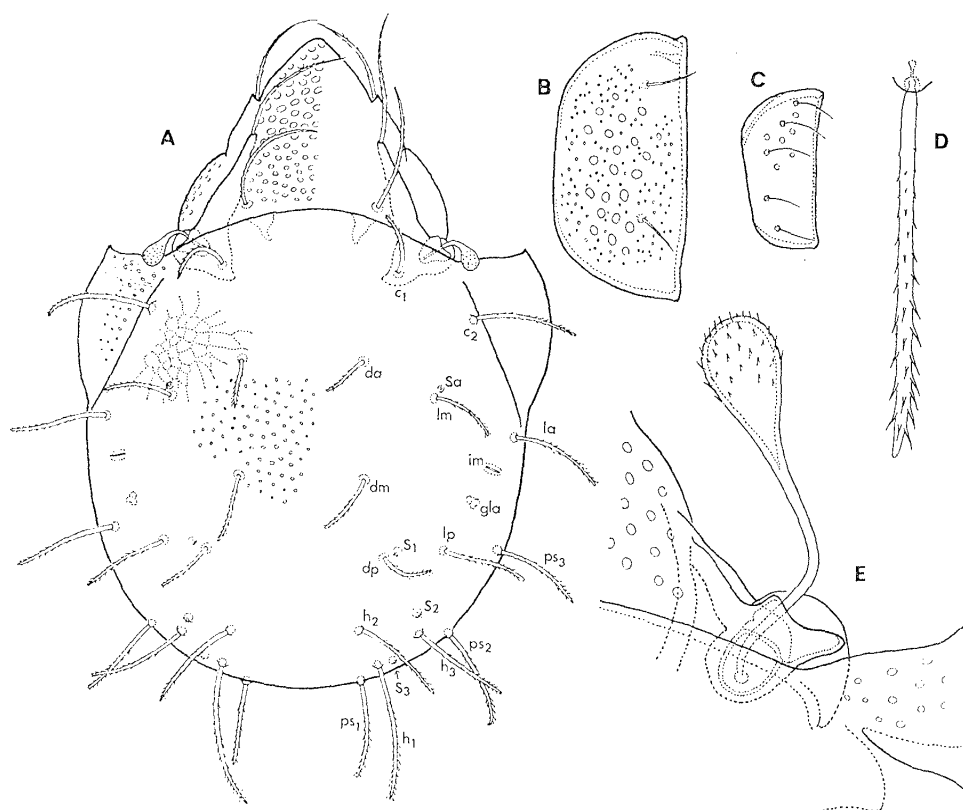


Fig. 2. *Peloribates barbatus* sp. n.—A, Dorsal side; B, anal plate; C, genital plate; D, notogastral seta; E, bothridium and sensillus.

Prefecture, 31-X-1976, F. Nishino, *ex* lichens growing on tombstones (Ja2292). —10 paratopotypes: the same data as the holotype. The type-series will be deposited in the collection of the National Science Museum (Nat. Hist.), Tokyo.

Remarks. In having distinctly foveolate body integument and notogastral setae stiff and blunt at tip, *Peloribates rangiroaensis* Hammer, 1972, from Atoll Rangiroa near Tahiti and *P. rangiroaensis asiaticus* Aoki, 1974, from S. Japan resemble the present new species. But their notogastral setae are far shorter than those of *P. barbatus* and the setae h_1 are not appreciably longer than the remaining notogastral setae. *P. longisetosus* (Willmann, 1930) from Guatemala has the notogastral setae nearly equal in RLN to those of *P. barbatus*, but the setae are sharper at the tip, the sensilli have a longer peduncle, and the body integument lacks in distinct foveolation.

LITERATURE

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